III.   REMARKS

1. Claims 1, 2, 4-22, 24 and 25 remain in the application. Claims 3, 23, and 26 have been cancelled. Claims _____ have been amended.

2. Applicants respectfully submit that claims 1, 8, 18, and 24 are not anticipated by Shih et al. (Chihhsiong S. Shih and Lester A. Gerhardt, "Surface sampling techniques for 3D object inspection", 1995, SPIE Vol. 2423, p.p. 118-135, "Shih") under 35 USC 102(b).

Shih fails to disclose or suggest determining, for each of said inner points, a corresponding value of the physical property at said inner point, wherein in case a predefined criterion is fulfilled, said value at the inner point is obtained by interpolation, and wherein in case the predefined criterion is not fulfilled, said value at the inner point is obtained by performing a measurement, as recited by claims 1 and 24.

Shih discloses an adaptive sampling strategy that includes projecting an object surface onto an arbitrary plane, forming a boundary box that encloses the area of the projected object surface, subdividing the projected area into four rectangles using the corners and points inserted in the center and midway along the edges of the box, and calculating an error value for each rectangle. If the error is greater than a threshold, Shih repeats the steps until the error is no longer greater than the threshold.

Shih calculates the rectangle error value by using the same 3 corners of each rectangle to determine a plane, calculating a point P4' from the intersection of a line through the fourth corner and the plane, and comparing the difference between calculated P4' and the fourth corner. Nowhere does Shih disclose or suggest determining, for each inner point, a corresponding value of the physical property at the inner point.

Furthermore, Shih has no disclosure related to predetermination of a criteria, where in case the predefined criterion is fulfilled, the value at the inner point is obtained by

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interpolation, and where in case the predefined criterion is not fulfilled, the value at the inner point is obtained by performing a measurement

Shih calculates a point from a plane determined by the other 3 points of the rectangle. If the difference between the calculated point and the fourth point of the rectangle is greater than a threshold, Shih starts over. In contrast, the present claims determine a value for each inner point by either interpolation or measurement. If a predefined criteria is fulfilled, the value for the inner point is determined by interpolation. If the predefined criteria is not fulfilled, the value for the inner point is determined by performing a measurement.

At least for these reasons, Applicants submit that Shih does not anticipate independent claims 1 and 24 and dependent claims 8 and 18.

3. Applicants respectfully submit that claims 1, 2, 4-7, 18, 20, 24, and 25 are not anticipated by Abramovitch et al. (US 6,745,148, "") under 35 USC 102(e).

Abramovitch fails to disclose or suggest

> determining, for a set of cells of said first grid, at least one inner point per cell, whereby said inner points, together with the vertices of the first grid, form a respective second grid; and

> determining, for each of said inner points, a corresponding value of the physical property at said inner point, wherein in case a predefined criterion is fulfilled, said value at the inner point is obtained by interpolation, and wherein in case the predefined criterion is not fulfilled, said value at the inner point is obtained by performing a measurement,

as recited by claims 1 and 24

Abramovitch is directed to constructing diagrams representing the relationship of the bit error rate of a signal and one or more variable quantities. Abramovitch does not disclose or suggest a set of cells. In fact, there is no mention of cells anywhere in

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Abramovitch. In addition, there is no disclosure related to determining at least one inner point per cell, for a set of cells of a first grid. Figure 10A, cited by the Examiner, does not show cells defined by vertices 61-64. Points 61-64 are not vertices at all, but rather are measurement points that represent the relationship between a threshold voltage and a bit error rate. These measurement points are provided for constructing a V curve diagram. As disclosed in column 7, lines 43-57, the initial V curve diagram is used to select additional locations 71a and 72a where the relationship between a threshold voltage and a bit error rate is to be measured. There is nothing in Abramovitch related to determining, for a set of cells of said first grid, at least one inner point per cell, whereby said inner points, together with the vertices of the first grid, form a respective second grid.

Abramovitch has no disclosure related to determining, for each of said inner points, a corresponding value of the physical property at said inner point, wherein in case a predefined criterion is fulfilled, said value at the inner point is obtained by interpolation, and wherein in case the predefined criterion is not fulfilled, said value at the inner point is obtained by performing a measurement. Column 7, lines 50-53, cited by the Examiner, discloses measuring the relationship between a threshold voltage and a bit error rate at locations 71a and 72a to determine additional measurement points. Column 8, lines 48-50, also cited by the Examiner, simply states:

> Selection of the locations at which the relationship between threshold voltage and BER are to be measured can be based on one or more of a plurality of different functions.

Applicants fail to find any disclosure in Abramovitch related to determining, for each of said inner points, a corresponding value of the physical property at said inner point, wherein in case a predefined criterion is fulfilled, said value at the inner point is obtained by interpolation, and wherein in case the predefined criterion is not fulfilled, said value at the inner point is obtained by performing a measurement.

At least for these reasons, Applicants submit that Abramovitch does not anticipate independent claims 1 and 24 and dependent claims 2, 4-7, 18, 20, and 25.

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4.   Applicants respectfully submit that claim 9 is patentable over Shih. under 35 USC 103(a).

Claim 9 depends from claim 1.

For the reasons argued above, Shih fails to disclose or suggest determining, for each of said inner points, a corresponding value of the physical property at said inner point, wherein in case a predefined criterion is fulfilled, said value at the inner point is obtained by interpolation, and wherein in case the predefined criterion is not fulfilled, said value at the inner point is obtained by performing a measurement, as recited by claim 1.

Therefore, Shih fails to render claim 9 unpatentable.

5.   Applicants respectfully submit that claim 10 is patentable over the combination of Shih and Etter et al. (US 5,673,210) under 35 USC 103(a).

Claim 10 depends from claim 1.

Etter fails to provide the features of claim 1 missing from Shih, that is, determining, for each of said inner points, a corresponding value of the physical property at said inner point, wherein in case a predefined criterion is fulfilled, said value at the inner point is obtained by interpolation, and wherein in case the predefined criterion is not fulfilled, , said value at the inner point is obtained by performing a measurement.

Because neither reference discloses or suggests these features of claim 1, the combination of Shih and Etter fails to render claim 10 unpatentable.

6.   Applicants respectfully submit that claims 11 and 12 are patentable over the combination of Shih and Bordes et al. (US 6,909,747, "Bordes under 35 USC 103(a).

Claims 11 and 12 depend from claim 1.

Bordes fails to disclose or suggest the features of claim 1 missing from Shih. Specifically, Bordes fails to disclose or suggest determining, for each of said inner points, a corresponding value of the physical property at said inner point, wherein in

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case a predefined criterion is fulfilled, said value at the inner point is obtained by interpolation, and wherein in case the predefined criterion is not fulfilled, said value at the inner point is obtained by performing a measurement.

Because neither reference discloses or suggests these features of claim 1, the combination of Shih and Bordes fails to render claims 11 and 12 unpatentable.

7.   Applicants respectfully submit that claims 13 and 14 are patentable over the combination of Shih and Ghaderi et al. (US 5,438,633, "Ghaderi") under 35 USC 103(a).

Claims 13 and 14 depend from claim 1.

Ghaderi fails to supply the features of claim 1 missing from Shih, that is, determining, for each of said inner points, a corresponding value of the physical property at said inner point, wherein in case a predefined criterion is fulfilled, said value at the inner point is obtained by interpolation, and wherein in case the predefined criterion is not fulfilled, said value at the inner point is obtained by performing a measurement.

Because neither reference discloses or suggests these features of claim 1, the combination of Shih and Ghaderi fails to render claims 13 and 14 unpatentable.

8.   Applicants respectfully submit that claim 15 is patentable over the combination of Shih, Bordes, and Cok. (US 5,032,910), under 35 USC 103(a).

Claim 15 depends from claim 1.

Neither Shih, Bordes, nor Cok discloses or suggests determining, for each of said inner points, a corresponding value of the physical property at said inner point, wherein in case a predefined criterion is fulfilled, said value at the inner point is obtained by interpolation, and wherein in case the predefined criterion is not fulfilled, said value at the inner point is obtained by performing a measurement, as recited by claim 1.

The combination of Shih, Bordes, and Cok fails to render claim 15 unpatentable because none of the cited references disclose or suggest these features of claim 1.

9.   Applicants respectfully submit that claim 16 is patentable over the combination of Shih and Lane et al. (Pierre M. Lane, Ronnie Van Dommelen and Michael Cada, "Compact Disc Players in the Laboratory: Experiments in Optical Storage, Error Correction, and Optical Fiber Communication", 2001, IEEE Transactions on Education, Vol. 44, No.1, pp. 47-60, "Lane") under 35 USC 103(a).

Claim 16 depends from Claim 1.

Lane has no disclosure related to determining, for each of said inner points, a corresponding value of the physical property at said inner point, wherein in case a predefined criterion is fulfilled, said value at the inner point is obtained by interpolation, and wherein in case the predefined criterion is not fulfilled, said value at the inner point is obtained by performing a measurement. Thus, Lane does not provide the features of claim 1 missing Shih. Therefore, because neither reference discloses or suggests these features of claim 1, the combination of Shih and Lane fails to render claim 16 unpatentable.

10.   Applicants respectfully submit that claim 17 is patentable over the combination of Shih and Figueiredo. (Luiz Henrique de Figueiredo, Adaptive Sampling of Parametric Curves, 1995, Academic Press Inc., Graphics Gems V, pp. 173-178) under 35 USC 103(a).

Claim 17 depends from claim 1.

There is nothing in Figueiredo related to determining, for each of said inner points, a corresponding value of the physical property at said inner point, wherein in case a predefined criterion is fulfilled, said value at the inner point is obtained by interpolation, and wherein in case the predefined criterion is not fulfilled, said value at the inner point is obtained by performing a measurement. Thus, the combination of Shih and Figueiredo fails to disclose or suggest all the features of claim 1 and cannot render claim 17 unpatentable.

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11.   Applicants respectfully submit that claim 19 is patentable over the combination of Shih and Wu (US 6,329,833) under 35 USC 103(a).

Claim 19 depends from claim 1.

Wu fails to disclose or suggest the features of claim 1 missing from Shih, that is, determining, for each of said inner points, a corresponding value of the physical property at said inner point, wherein in case a predefined criterion is fulfilled, said value at the inner point is obtained by interpolation, and wherein in case the predefined criterion is not fulfilled, said value at the inner point is obtained by performing a measurement.

Because neither reference discloses or suggests these features of claim 1, the combination of Shih and Wu fails to render claim 19 unpatentable.

12.   Applicants respectfully submit that claims 21 and 22 are patentable over the combination of Shih, Waschura et al. (US 6,728,311, "Waschura") and Ohsawa (US 5,717,694) under 35 USC 103(a).

Claims 21 and 22 depend from claim 1.

Neither Waschura nor Ohsawa provide the features of claim 1 missing from Shih, including: determining, for each of said inner points, a corresponding value of the physical property at said inner point, wherein in case a predefined criterion is fulfilled, said value at the inner point is obtained by interpolation, and wherein in case the predefined criterion is not fulfilled, said value at the inner point is obtained by performing a measurement.

Therefore, the combination of Shih, Waschura, and Ohsawa fails to render claims 21 and 22 unpatentable.

13.   Applicants respectfully submit that claim 25 is patentable over the combination of Shih and Waschura under 35 USC 103(a).
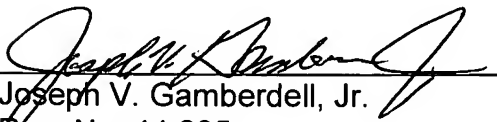
Claim 25 depends from claim 24.

As argued above, Shih fails to disclose or suggest determining, for each of said inner points, a corresponding value of the physical property at said inner point, wherein in case a predefined criterion is fulfilled, said value at the inner point is obtained by interpolation, and wherein in case the predefined criterion is not fulfilled, said value at the inner point is obtained by performing a measurement. There is nothing in Waschura related to these missing features.

Therefore, the combination of Shih and Waschura fails to render claim 25 unpatentable.

For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record, and are in proper form for allowance. Accordingly, favorable reconsideration and allowance is respectfully requested. Should any unresolved issues remain, the Examiner is invited to call Applicants' attorney at the telephone number indicated below.

The Commissioner is hereby authorized to charge payment for any fees associated with this communication or credit any over payment to Deposit Account No. 16-1350.

Respectfully submitted,

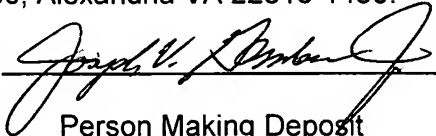Joseph V. Gamberdell, Jr.   Date 8/18/08
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